#2 OIPE

RAW SEQUENCE LISTING DATE: 10/24/2001 PATENT APPLICATION: US/09/970,076 TIME: 14:17:42

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              Bradley, Kenneth A.
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              Collier, Robert J.
             Mogridge, Jeremy S.
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C--> 13 <141> CURRENT FILING DATE: 2001-10-03
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    63 Gln Ile Arg Gln Gly Leu Glu Leu Gln Lys Val Leu Pro Gly Gly
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-	+ 00	200		+ ~+	~~~	gga	~~ ~·		+++		att	ato		2/12	aas	220	835
						Gly											000
	ser		ire	Cys	міа	GLY	235	Ser	FIIE	GIII	Val	240	Val	лгу	GIY	ASII	
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100						250					255			~+~	~		931
																gac	931
	тте	ASI	ı ASE	ser			rec	I ASI	GIL			PHE	s ser	val	275	ı Asp	
104					265				+ -	270		. ~~~		~~~			979
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10/				_	_											aaa	
100	Thr			ı Lev	. Cys				Il€	e Leu				Gly	Met	l aaa Lys	
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RAW SEQUENCE LISTING DATE: 10/24/2001 PATENT APPLICATION: US/09/970,076 TIME: 14:17:42

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RAW SEQUENCE LISTING DATE: 10/24/2001 PATENT APPLICATION: US/09/970,076 TIME: 14:17:42

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319 321 323 324 325	aatt cgcg ctgc	tgeti ggate etete	tee g gge g eee d	gggga gegta eggga	igtto cooto ctgoo	ga go	ggteg ec at Me	gtggd tg gd et Al	e gaq ec ad la Tl	gtteg eg ge nr Al	gegg eg ga La Gi	agce ag ce lu Ai 5	gtggg gg ag rg Ai	gaa q ga go rg Al	ggage cc ct la Le	eggacc tc ggc eu Gly 10	120
319 321 323 324 325 327	aatt cgcg ctgc	tgeti ggate etete	tee g gge g eee d	gggga gegte eggge cag	igtto eccto etgeo tgg	ga go gg go ctc	ggtcg cc at Me	gtggd tg gd et Al 1 ttg	e gaç ec ac la Tl gcç	gtteg eg ge nr Al	gegg eg ga La Gi etg	agco ag co lu Ai 5 gtg	gtggg gg ag rg Ai	gaa g ga go rg Al atc	ggago cc ct la Lo tgc	eggacc tc ggc eu Gly 10 gcc	120 173
319 321 323 324 325 327 328	aatt cgcg ctgc	tgeti ggate etete	tee g gge g eee d	gggga gegte eggge cag	igtto eccto etgeo tgg	ga go gg go ctc	ggtcg cc at Me	gtggd tg gd et Al 1 ttg	e gaç ec ac la Tl gcç	gtteg eg ge nr Al	gegg eg ga La Gi etg	agco ag co lu Ai 5 gtg	gtggg gg ag rg Ai	gaa g ga go rg Al atc	ggago cc ct la Lo tgc	eggacc tc ggc eu Gly 10 gcc	120 173
319 321 323 324 325 327 328 329	aatt cgc ctgc atc Ile	ggat ggat etet ggc Gly	tee g ge g eee d tte Phe	gggga gegte gggge cag Gln	tgg Trp	ga go gg go ctc Leu	ggtcg cc at Me tct Ser	gtggd tg gd et Al 1 ttg Leu	e gaç la Tl gcç Ala	gttcg cg gc nr Al act Thr 20	gegg eg ga La Gi etg Leu	agco ag co lu Ai 5 gtg Val	gtggg gg ag rg Ai ctc Leu	gaa g ga go rg Al atc Ile	ggage cc ct La Le tgc Cys 25	eggacc tc ggc eu Gly 10 gcc Ala	120 173 221
319 321 323 324 325 327 328 329 331	aatt cgcc ctgc atc Ile	ggate ggate ggc Gly	tcc ggc ccc c	gggga gegte eggge cag Gln gga	tgg Trp 15	ga go gg go ctc Leu agg	ggteg ec at Me tct Ser gag	gtggd tg gd et Al 1 ttg Leu gat	gaç ec ac la Tl gcç Ala	gtteg eg go nr Al act Thr 20 ggt	gegg eg ga La G: etg Leu cca	agco ag co lu Ai 5 gtg Val gcc	gtggg gg ag rg Ai ctc Leu tgc	gaa g ga go rg Al atc Ile tac	ggage CC Ct La Le tgc Cys 25 ggc	eggacc tc ggc eu Gly 10 gcc Ala	120 173
319 321 323 324 325 327 328 329 331 332	aatt cgc ctgc atc Ile	ggate ggate ggc Gly	tcc ggc ccc c	ggggg gegte eggge cag Gln gga Gly	tgg Trp 15	ga go gg go ctc Leu agg	ggteg ec at Me tct Ser gag	gtggd tg gd et Al 1 ttg Leu gat	ggg gcç Ala ggg Gly	gtteg eg go nr Al act Thr 20 ggt	gegg eg ga La G: etg Leu cca	agco ag co lu Ai 5 gtg Val gcc	gtggg gg ag rg Ai ctc Leu tgc	gaa g ga go rg Al atc Ile tac	ggage CC Ct La Le tgc Cys 25 ggc	eggacc tc ggc eu Gly 10 gcc Ala	120 173 221
319 321 323 324 325 327 328 329 331 332 333	aatt cgcg ctgc atc Ile ggg Gly	ggato ggc Gly caa Gln	tcc ggc gcc d ttc Phe ggg Gly	gggggggggggggggggggggggggggggggggggggg	tgg Trp 15 cgc	ga go ctc Leu agg Arg	ggtog cc at Me tct Ser gag Glu	gtggg tg gg et Al 1 ttg Leu gat Asp	gec acla The gec Ala ggg Gly 35	gtteg eg ge nr Al act Thr 20 ggt Gly	gegg eg ga La Gi etg Leu eca Pro	agce lu Ai 5 gtg Val gcc Ala	gtggg gg ag cg Ar ctc Leu tgc Cys	gaa g ga go rg Al atc Ile tac Tyr 40	tgc Cys 25 ggc Gly	eggacc tc ggc eu Gly 10 gcc Ala gga Gly	120 173 221 269
319 321 323 324 325 327 328 329 331 332 333 335	aatt cgcg ctgc atc Ile ggg Gly	ggato ggc Gly caa Gln gac	tcc ggc gcc d ttc Phe ggg Gly	gggggggggggggggggggggggggggggggggggggg	tgg Trp 15 cgc Arg	ga go gg go ctc Leu agg Arg	ggtog cc at Me tct Ser gag Glu ttg	gtgggget A: 1 ttg Leu gat Asp	geç acı acı geç Ala ggg Gly 35 aaa	gtteg eg ge nr Al act Thr 20 ggt Gly tca	gcgg cg ga La Gi ctg Leu cca Pro	agco ag co lu Ai 5 gtg Val gcc Ala	gtggg gg ag cg Ar ctc Leu tgc Cys	gaa g ga go rg Al atc Ile tac Tyr 40 ctg	tgc Cys 25 ggc Gly	eggacc tc ggc eu Gly 10 gcc Ala gga Gly	120 173 221
319 321 323 324 325 327 328 329 331 332 333 335 336	aatt cgcg ctgc atc Ile ggg Gly	ggato ggc Gly caa Gln gac	ttc ggc gcc dttc Phe ggg Gly ctg	gggggggggggggggggggggggggggggggggggggg	tgg Trp 15 cgc Arg	ga go gg go ctc Leu agg Arg	ggtog cc at Me tct Ser gag Glu ttg	gtgggget All ttg Leu gat Asp gac Asp	geç acı acı geç Ala ggg Gly 35 aaa	gtteg eg ge nr Al act Thr 20 ggt Gly tca	gcgg cg ga La Gi ctg Leu cca Pro	agco ag co lu Ai 5 gtg Val gcc Ala	gtggggg ag ctc Leu tgc Cys gtg	gaa g ga go rg Al atc Ile tac Tyr 40 ctg	tgc Cys 25 ggc Gly	eggacc tc ggc eu Gly 10 gcc Ala gga Gly	120 173 221 269
319 321 323 324 325 327 328 329 331 332 333 335 336 337	atc ctgc atc Ile ggg Gly ttt Phe	ggc ggc Gly caa Gln gac Asp	ttc ggc ccc cttc Phe ggg Gly ctg Leu 45	gggggggggggggggggggggggggggggggggggggg	tgg Trp 15 cgc Arg	ctc Leu agg Arg att	tct Ser gag Glu ttg Leu	gtggg tg gg et Al 1 ttg Leu gat Asp gac Asp	geç ada Tl geç Ala ggg Gly 35 aaa Lys	act Thr 20 ggt Gly tca Ser	gcgg cg ga La Gl ctg Leu cca Pro gga Gly	agco ag co lu Ai 5 gtg Val gcc Ala agt Ser	gtggggg ag ctc Leu tgc Cys gtg Val	gaa g ga g ga g atc Ile tac Tyr 40 ctg Leu	tgc Cys 25 ggc Gly cac	eggacc tc ggc eu Gly 10 gcc Ala gga Gly cac	120 173 221 269 317
319 321 323 324 325 327 328 329 331 332 333 335 336 337 339	atc Ile ggg Gly ttt Phe tgg	ggc Gly caa Gln gac Asp	ttc ggc ccc cttc Phe ggg Gly ctg Leu 45 gaa	gggggggggggggggggggggggggggggggggggggg	tgg Trp 15 cgc Arg ttc Phe	ctc Leu agg Arg att Ile	tct Ser gag Glu ttg Leu	gtggg tg gg et Al 1 ttg Leu gat Asp gac Asp gtg	geç ala geç Ala ggg Gly 35 aaa Lys	act Thr 20 ggt Gly tca Ser	ctg La Gi Leu cca Pro gga Gly	agco lu Ai 5 gtg Val gcc Ala agt Ser	gtggggg ag ctc Leu tgc Cys gtg Val 55 cac	gaa gaa ga	tgc Cys 25 ggc Gly cac His	eggacc tc ggc eu Gly 10 gcc Ala gga Gly cac His	120 173 221 269
319 321 323 324 325 327 328 329 331 332 333 335 336 337 339 340	atc ctgc atc Ile ggg Gly ttt Phe	ggc ggc Gly caa Gln gac Asp aat	ttc ggc ccc cttc Phe ggg Gly ctg Leu 45 gaa	gggggggggggggggggggggggggggggggggggggg	tgg Trp 15 cgc Arg ttc Phe	ctc Leu agg Arg att Ile	tct Ser gag Glu ttg Leu ttt	gtggg tg gg et Al 1 ttg Leu gat Asp gac Asp gtg	geç ala geç Ala ggg Gly 35 aaa Lys	act Thr 20 ggt Gly tca Ser	ctg La Gi Leu cca Pro gga Gly	agco lu Ai 5 gtg Val gcc Ala agt Ser	gtggggg ag ctc Leu tgc Cys gtg Val 55 cac	gaa gaa ga	tgc Cys 25 ggc Gly cac His	eggacc tc ggc eu Gly 10 gcc Ala gga Gly cac His	120 173 221 269 317
319 321 323 324 325 327 328 329 331 332 333 335 336 337 340 341	atc ctgc atc Ile ggg Gly ttt Phe tgg	ggc Gly caa Gln gac Asp aat Asn 60	ttc ggc ccc ccc ttc Phe ggg Gly ctg Leu 45 gaa Glu	cag Gln gga Gly 30 tac Tyr atc	tgg Trp 15 cgc Arg ttc Phe	ctc Leu agg Arg att Ile	tct Ser gag Glu ttg Leu ttt Phe 65	gtgggetg garage for the second	gcc ad gcc Ala ggg Gly 35 aaa Lys gaa Glu	act Thr 20 ggt Gly tca Ser cag	ctg La Gi Leu cca Pro gga Gly ttg	agco lu An 5 gtg Val gcc Ala agt Ser gct Ala 70	gtgggggg Ag ctc Leu tgc Cys gtg Val 55 cac	gaa gaa ga	tgc Cys 25 ggc Gly cac His ttc	eggacc tc ggc eu Gly gcc Ala gga Gly cac His	120 173 221 269 317 365
319 321 323 324 325 327 328 329 331 332 333 335 336 337 340 341 343	aatt cgcg ctgc atc Ile ggg Gly ttt Phe tgg Trp	ggc Gly caa Gln gac Asp aat Asn 60 cca	ttc ggc ccc ccc ttc Phe ggg Gly ctg Leu 45 gaa Glu cag	gggggggggggggggggggggggggggggggggggggg	tgg Trp 15 cgc Arg ttc Phe tat	ctc Leu agg Arg att Ile tac Tyr	tct Ser gag Glu ttg Leu ttt Phe 65	gtgggetg All ttg Leu gat Asp gac Asp yal ttt	gcc ad a Tl gcc Ala ggg Gly 35 aaa Lys gaa Glu att	act Thr 20 ggt Gly tca Ser cag Gln	ctg La Gi Leu cca Pro gga Gly ttg Leu ttc	aged aged bu And 5 gtg Val gcc Ala agt Ser gct Ala 70 tcc	gtggg gg Ag ctc Leu tgc Cys gtg Val 55 cac His	gaa ggaa gga gga atc Ile tac Tyr 40 ctg Leu aaa Lys	tgc Cys 25 ggc Gly cac His ttc Phe	eggacc tc ggc eu Gly 10 gcc Ala gga Gly cac His atc Ile	120 173 221 269 317
319 321 323 324 325 327 328 329 331 332 333 335 336 337 340 341 343 344	aatt cgcg ctgc atc Ile ggg Gly ttt Phe tgg Trp	ggc Gly caa Gln gac Asp aat Asn 60 cca	ttc ggc ccc ccc ttc Phe ggg Gly ctg Leu 45 gaa Glu cag	gggggggggggggggggggggggggggggggggggggg	tgg Trp 15 cgc Arg ttc Phe tat	ctc Leu agg Arg att Ile tac Tyr	tct Ser gag Glu ttg Leu ttt Phe 65	gtgggetg All ttg Leu gat Asp gac Asp yal ttt	gcc ad a Tl gcc Ala ggg Gly 35 aaa Lys gaa Glu att	act Thr 20 ggt Gly tca Ser cag Gln	ctg ctg Leu cca Pro gga Gly ttg Leu ttc Phe	aged aged bu And 5 gtg Val gcc Ala agt Ser gct Ala 70 tcc	gtggg gg Ag ctc Leu tgc Cys gtg Val 55 cac His	gaa ggaa gga gga atc Ile tac Tyr 40 ctg Leu aaa Lys	tgc Cys 25 ggc Gly cac His ttc Phe	eggacc tc ggc tc ggc eu Gly 10 gcc Ala gga Gly cac His atc Ile aca Thr	120 173 221 269 317 365
319 321 323 324 325 327 328 329 331 332 333 335 336 337 340 341 343 344 345	aatt cgcg ctgc atc Ile ggg Gly ttt Phe tgg Trp agc Ser 75	ggc Gly caa Gln gac Asp aat Asn 60 cca Pro	ttc ggc g ttc Phe ggg Gly ctg Leu 45 gaa Glu cag Gln	gggggggggggggggggggggggggggggggggggggg	tgg Trp 15 cgc Arg ttc Phe tat Tyr	ctc Leu agg Arg att Ile tac Tyr atg Met 80	tct Ser gag Glu ttg Leu ttt Phe 65 tcc Ser	gtgggetg A	gcc adla Tl gcc Ala ggg Gly 35 aaa Lys gaa Glu att	act Thr 20 ggt Gly tca Ser cag Gln gtt Val	ctg La Gi ctg Leu cca Pro gga Gly ttg Leu ttc Phe 85	aged aged bu And 5 gtg Val gcc Ala agt Ser gct Ala 70 tcc Ser	tgc ctc Leu tgc Cys gtg Val 55 cac His	gaa	tgc Cys 25 ggc Gly cac His ttc Phe	ggacc tc ggc tc ggc eu Gly gcc Ala gga Gly cac His atc Ile aca Thr 90	120 173 221 269 317 365 413
319 321 323 324 325 327 328 329 331 332 333 335 336 337 339 340 341 343 344 345 347	aatt cgcg ctgc atc Ile ggg Gly ttt Phe tgg Trp agc ser 75	ggc Gly caa Gln gac Asp aat Asn 60 cca Pro	ttc ggc g ttc Phe ggg Gly ctg Leu 45 gaa Glu cag Gln atg	gggggggggggggggggggggggggggggggggggggg	tgg Trp 15 cgc Arg ttc Phe tat Tyr aga Arg	ctc Leu agg Arg att Ile tac Tyr atg Met 80	tct Ser gag Glu ttg Leu ttt Phe 65 tcc Ser	gtgggetg A. 1 ttg Leu gat Asp gac Asp yal ttt Phe gac	gcc adla Tl gcc Ala ggg Gly 35 aaa Lys gaa Glu att Ile	act Thr 20 ggt Gly tca Ser cag Gln gtt Val	ctg La G Ctg Leu Cca Pro gga Gly ttg Leu ttc Phe 85 Caa	aged aged bu And 5 gtg Val gcc Ala agt Ser gct Ala 70 tcc Ser atc	ctc Leu tgc Cys gtg Val 55 cac His acc	gaa	tgc ctla Le Cys 25 ggc Gly cac His ttc Phe gga Gly	ggacc tc ggc tc ggc tc ggc all gcc Ala gga Gly cac His atc Ile aca Thr 90 cta	120 173 221 269 317 365
319 321 323 324 325 327 328 329 331 332 333 335 336 337 340 341 343 344 345 347 348	aatt cgcg ctgc atc Ile ggg Gly ttt Phe tgg Trp agc Ser 75	ggc Gly caa Gln gac Asp aat Asn 60 cca Pro	ttc ggc g ttc Phe ggg Gly ctg Leu 45 gaa Glu cag Gln atg	gggggggggggggggggggggggggggggggggggggg	tgg Trp 15 cgc Arg ttc Phe tat Tyr aga Arg ctg Leu	ctc Leu agg Arg att Ile tac Tyr atg Met 80	tct Ser gag Glu ttg Leu ttt Phe 65 tcc Ser	gtgggetg A. 1 ttg Leu gat Asp gac Asp yal ttt Phe gac	gcc adla Tl gcc Ala ggg Gly 35 aaa Lys gaa Glu att Ile	act Thr 20 ggt Gly tca Ser cag Gln gtt Val gaa Glu	ctg La G Ctg Leu Cca Pro gga Gly ttg Leu ttc Phe 85 Caa	aged aged bu And 5 gtg Val gcc Ala agt Ser gct Ala 70 tcc Ser atc	ctc Leu tgc Cys gtg Val 55 cac His acc	gaa	tgc ctla Le tgc Cys 25 ggc Gly cac His ttc Phe gga Gly ggc Gly	ggacc tc ggc tc ggc tc ggc all gcc Ala gga Gly cac His atc Ile aca Thr 90 cta	120 173 221 269 317 365 413
319 321 323 324 325 327 328 329 331 332 333 335 336 337 341 343 344 345 347 348 349	aatt cgcg ctgc atc Ile ggg Gly ttt Phe tgg Trp agc ser 75	ggc Gly caa Gln gac Asp aat Asn 60 cca Pro	ttc ggc g ttc Phe ggg Gly ctg Leu 45 gaa Glu cag Gln atg	cag Gln gga Gly 30 tac Tyr atc Ile ttg Leu	tgg Trp 15 cgc Arg ttc Phe tat Tyr aga Arg ctg Leu 95	ctc Leu agg Arg att Ile tac Tyr atg Met 80 aca Thr	tct Ser gag Glu ttg Leu ttt Phe 65 tcc Ser gaa Glu	gtgggetg A. 1 ttg Leu gat Asp gac Asp yal ttt Phe gac Asp	gcc ad a Tl gcc Ala ggg Gly 35 aaa Lys gaa Glu att Ile aga Arg	act Thr 20 ggt Gly tca Ser cag Gln gtt Val gaa Glu 100	ctg La G Ctg Leu Cca Pro gga Gly ttg Leu ttc Phe 85 caa Gln	aged aged bu And 5 gtg Val gcc Ala agt Ser gct Ala 70 tcc Ser atc	ctc Leu tgc Cys gtg Val 55 cac His acc Thr	gaa	tgc ctla Le tgc Cys 25 ggc Gly cac His ttc Phe gga Gly 105	ggacc tc ggc tc ggc tc ggc tc ggc tc ggc ala gga Gly cac His atc Ile aca Thr 90 cta Leu	120 173 221 269 317 365 413

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/970,076

DATE: 10/24/2001 TIME: 14:17:43

Input Set : A:\Uw977451.app

Output Set: N:\CRF3\10242001\1970076.raw

 ${\tt L:12~M:270~C:~Current~Application~Number~differs,~Replaced~Application~Number}$

L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date